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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,499	12/26/2001	Kevin Stanley	284P2US	7863

20577 7590 09/09/2003

LONG AND CAMERON  
SUITE 1401 - 1166 ALBERNI STREET  
VANCOUVER, BC V6E 3Z3  
CANADA

EXAMINER
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NGUYEN, THU V

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/025,499

Applicant(s)

STANLEY ET AL.

Examiner

Thu Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 7 is/are allowed.
- 6) ☒ Claim(s) 2-6 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other:  |

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## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the "antenna 20" as described in the specification page 4, line 4. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:
  - a. In the specification paragraph [0024], the disclosed "both at distance r from the origin" is unclear. What is the "origin", further, the distance "r" from the origin should be illustrated in the drawing.
  - b. In the specification paragraph [0024], the parameters K, j, m, n, q in the formula should be defined.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - a. In claim 5, line 8, the claimed "said signal" lacks of antecedent basis.
  - b. In claim 8, the meaning of "effecting" is ambiguous. It is not clear what action, or what procedure, the word "effecting" implies.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (US 4,754,280).

As per claim 2-4, 6, Brown teaches a self-correcting inertial navigation system including a phase difference triangulation apparatus, a data processor for correcting the inertial position data for drift (col.1, lines 24-35; col.3, lines 50-52; col.4, lines 19-37, lines 59-68; col.6, lines 10-23; fig.3). Brown does not teach a base station which is responsive to the inertial position data

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broadcasted by the RF signal, and displaying the corrected display. However, broadcasting RF signals from a mobile device to a base station, and displaying the position data would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include a known base station, and a display for displaying the position information to the system of Brown in order to allow the correction data to be calculated from a remote processor to reduce the work load for the processor of the mobile unit, and to allow the user to view the present location he is in.

As per claim 5, refer to claim 2 above. Further Brown teaches arranging the antennas such that they operate as an interferometer (col.4, lines 59-68).

As per claim 8, refer to claim 1 above. Brown does not explicitly teaches determining phase different from triangulation technique. However, Brown teaches arranging the antenna at the corner of a triangle (fig.3; col.4, lines 59-62). Further, using triangular technique to determine a signal from the known three positions would have been well known in a navigation system. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the well known triangulation technique to determine the phase difference of the received signals, since selecting a known technique to determine a signal from the three known signals requires only routine skill in the art.

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*Allowable Subject Matter*

7. Claims 1 and 7 are allowed.
8. The following is an examiner's statement of reasons for allowance:

Prior arts of record does not disclose broadcasting the signals generated by the inertial sensor of a mobile unit to remote receivers located at different locations; the phase differences between the inertial signals received at the different locations is determined; the position measured by the inertial sensor is corrected by the calculated phase difference.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Cited Prior Arts*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pinto et al (US 2002.0165669) teaches arranging antennas in the interferometer configuration, measuring the position of a mobile device using inertial measurement unit and compensating the accuracy for the navigation device (abstract; para [0078]; [0105]).

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**Any response to this action should be mailed to:**

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**or faxed to:**

(703) 305-7687, (for formal communications intended for entry)

**Or:**

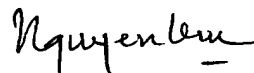
(703) 305-7687 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451 Crystal Drive,  
Arlington, VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner  
should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner  
can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone number for  
this Group is (703)305-7687 .

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Group receptionist whose telephone number is (703)308-1111.



Thu Nguyen

September 4, 2003